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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/619,664	07/15/2003	Edward Williams	FMC 1474 PUS / 202-0029	7170
28395 7590 11/15/2007 BROOKS KUSHMAN P.C./FGTL 1000 TOWN CENTER 22ND FLOOR SOUTHFIELD, MI 48075-1238			EXAMINER SAINDON, WILLIAM V	
			ART UNIT 3623	PAPER NUMBER
			MAIL DATE 11/15/2007	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/619,664

Applicant(s)

WILLIAMS ET AL.

Examiner

William V. Saindon

Art Unit

3623

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 15 July 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-23 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-23 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

2. Claims 1-23 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

As to claims 1, 11, and 22, and using claim 1 as an example, Applicant has not provided an enabling disclosure as to how to generate the computer model. Applicant merely provides examples of various input data (see e.g. specification at Tables 1 and 2). The specification does not indicate how a model would arise from the input data. Instead, the specification steps through various input data that would arise from various steps occurring in an automobile service facility. Figure 1 seems to indicate a model showing the flow of actions in a service shop, but does not indicate how to generate a model.

Model generation is not a simple task, and the accuracy and completeness of the equations and calculations it makes is absolutely determinative of its usefulness. Therefore, a high level of specificity is required in order to enable one skilled in the art to determine what model to use, and how to generate it. Otherwise, it would take undue

experimentation to sift through the infinity of possible inputs and their possible relationships before one of ordinary skill could arrive at Applicant's undisclosed method of generating a model. None of the Wands factors weigh in Applicant's favor as the specification simply does not address the issue of what steps to take to generate a model.

Because Applicant provides no guidance as to how the generation of a model occurs, the claim is not enabled.

As to claims 3, 13, and 23, and using claim 3 as an example, Applicant has not provided an enabling disclosure as to how to calculate and output an equation. The only relevant disclosure in the specification to equations is in paragraph 92, where an example regression equation is shown. However, at no point does the specification disclose how this, or any other equation, would be calculated or derived.

The creation of equations that model systems is not a trivial task, as many factors and relationships must be considered. Therefore, a high level of specificity is required in order to enable one skilled in the art to determine what factors are relevant in equation formation, as well as what their mathematical relationship would be.

Otherwise, it would take undue experimentation to come up with the proper selection of inputs and relationships to generate Applicant's undisclosed method to calculate an equation. None of the Wands factors weigh in Applicant's favor as the specification simply does not address the issue of what steps to take to calculate and output an equation.

Because Applicant provides no guidance as to how the calculation of an equation occurs, the claim is not enabled.

Further claims are rejected as containing the same or similar deficiencies by dependency.

3. Claims 1-23 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claims contain subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventors, at the time the application was filed, had possession of the claimed invention.

As to claims 1, 11, and 22, and using claim 1 as an example, Applicant has not provided sufficient written description such as to convey to one skilled in the relevant art that the inventors, at the time the application was filed, had possession of the claimed invention because Applicant has not written any steps related to generating a model.

A description of generating a model must include steps describing how the model is to be formed, which would include what inputs it would use or how to determine what inputs to use, what formulae or how to choose formulae which would describe the interrelationship between the inputs, as well as provide what outputs are to be determined from the model. Applicant, however, has provided no such steps other than providing a listing of various possible input values (e.g. Table 1). Additionally, Applicant has provided one model (e.g. Fig. 1), but has not provided how the model was created, or what the interrelationship (mathematically) would be between the recited parts of the model.

Therefore, Applicant has not provided sufficient written evidence to convey that Applicant had possession of a method to generate a model.

Similar reasoning applies to claims 3, 13, and 23, because Applicant has not provided any written disclosure as to how one would calculate and output an equation when no such steps are described in the specification.

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claims 2-3, 12-14, and 23 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

As to claims 2, 12, and 23, it is unclear how the defining of a computer experiment differs from inputting data. It would seem that the input of data for use in a model would be the experiment.

As to claims 3, 13, and 23, it is unclear how the equation is being calculated. Does the Applicant mean that a known equation is used (i.e. calculated) or that an equation is generated (e.g. a regression equation from known data)?

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the

invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

8. Claims 1-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Golightly et al. (US 2003/0046130) (hereinafter Golightly).

As to claim 1, Golightly discloses a system for modeling, the system comprising a computer configured to:

receive input data defining customer characteristics, facility capabilities, and financial data for an automobile service facility [i.e. input data] (see Fig. 2C, ¶¶ 30 and 32, noting that the input data takes the form of customer data, financial data, and other suitable variables. See also ¶ 47-49, noting that the model also uses facility capabilities such as systems, processes, production, maintenance, and other relevant input data);

generate a computer model of the service facility based on the customer characteristics, facility capabilities, and financial data [i.e. use the model] (see id., noting that model 215 is used); and

output one or more quantitative indications of expected facility performance based on the model (see id., noting that action variables provide predictive metrics from the model based on the input).

Golightly does not explicitly disclose the intended use of modeling automobile service centers.

However, Golightly does disclose that the model can be a process model or maintenance model (see ¶ 47, noting that automotive service centers are well known to perform maintenance).

Therefore, it would have been obvious to a person having ordinary skill in the art at the time of invention to specify that the inputs in Golightly were to be used to model an automobile service center because models like Golightly are well known and provide the predictable result of providing insight into the behavior of a system in order to make decisions based upon the results of the model. Furthermore, automotive service centers are a well known entity, as most people have vehicles, and the centers are well known for providing maintenance, which Golightly expressly considers for modeling (see ¶ 47).

As to claim 2, Golightly discloses defining a computer experiment to identify one or more service facility characteristics that have an impact on service facility efficiency or revenue (see ¶ 33, noting that the model output is used for analysis and decision making, based upon defined model inputs, for the purpose of improving the defined entity).

As to claim 3, Golightly discloses to calculate and output an equation quantitatively interrelating one or more of the service facility characteristics that have an impact on service facility efficiency or revenue [i.e. output efficiency or revenue data] (see ¶¶33-34, noting that the model can be used to interrelate the above noted inputs by providing a tool for analysis and decision making, including process control, which affects efficiency and revenue).

As to claim 4, Golightly discloses the model utilizes probability to account for uncertainty in at least a portion of the input data (see ¶ 19, noting that using probability in models is well known).

As to claims 5-10, various variables for use in the model are recited. All of the claimed variables are well known to apply to service centers and are not novel variables in and of themselves. The Examiner takes Official Notice that arrival rates, personnel quantities, service times, part and labor revenue, and time to process are old and well known in the art of scheduling. Therefore, it would have been obvious to a person having ordinary skill in the art at the time of invention to include each of these variables in the model in Golightly, for the purpose of providing a comprehensive model that could provide the most optimal course of action.

Claims 11-13 are rejected for similar reasons as claims 1-3, respectively.

As to claim 14, Golightly discloses changing the operation of the service facility to improve efficiency or revenue based at least in part on the relative quantitative significance of factors making up the quantitative expression (see ¶ 32, noting that the model is used to find an optimal price).

Claims 15-21 are rejected for similar reasons as claims 4-10, respectively.

Claims 22-23 are rejected for similar reasons as claims 1-2, respectively.

Information Disclosure Statement

9. The Examiner notes that an IDS may have been attempted to be filed July 15, 2003, but no form PTO/SB08A was included. Because the list, which would identify relevant sections of cited art, is not provided, and because the one reference received from the Applicant (regarding Simul8) is particularly voluminous, the reference has NOT been considered.

10. The information disclosure statement filed July 15, 2003 fails to comply with 37 CFR 1.98(a)(1), which requires the following: (1) a list of all patents, publications, applications, or other information submitted for consideration by the Office; (2) U.S. patents and U.S. patent application publications listed in a section separately from citations of other documents; (3) the application number of the application in which the information disclosure statement is being submitted on each page of the list; (4) a column that provides a blank space next to each document to be considered, for the examiner's initials; and (5) a heading that clearly indicates that the list is an information disclosure statement. The information disclosure statement has been placed in the application file, but the information referred to therein has not been considered.

11. The information disclosure statement filed on July 15, 2003 does not fully comply with the requirements of 37 CFR 1.98(b) because: no listing has been filed. Since the submission appears to be *bona fide*, applicant is given **ONE (1) MONTH** from the date

of this notice to supply the above mentioned omissions or corrections in the information disclosure statement. NO EXTENSION OF THIS TIME LIMIT MAY BE GRANTED UNDER EITHER 37 CFR 1.136(a) OR (b). Failure to timely comply with this notice will result in the above mentioned information disclosure statement being placed in the application file with the noncomplying information **not** being considered. See 37 CFR 1.97(i).

Conclusion

12. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Konicek et al. (US 2004/0049369) disclose a system for facility management by using several models to manage production costs and efficiency.

Adler (US 2002/0169658) discloses a system for modeling and analyzing strategic business decisions.

Katsof et al. (US 4,700,295) disclose a method for forecasting bank traffic and scheduling work assignments for bank personnel. Considers staff utilization, customer arrival rates, service costs, service times, and other well known scheduling variables.

Jin et al. (US 2003/0233273) disclose a method for simulating a business process using historical execution data.

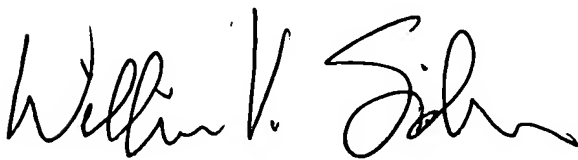
McDonough et al. (US 6,070,142) disclose a virtual customer sales and service center.

Castonguay et al. (US 5,911,134) disclose a method for planning, scheduling, and managing personnel.

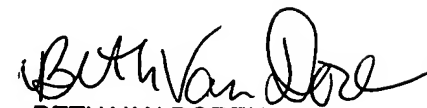
Any inquiry concerning this communication or earlier communications from the examiner should be directed to William V. Saindon whose telephone number is (571) 270-3026. The examiner can normally be reached on M-F 7:30-5; alt. Fridays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tariq Hafiz can be reached on (571) 272-6729. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



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